



6560-50-P

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Parts 52 and 81**

**[EPA-R07-OAR-2017-0734; FRL 9972-64-Region 7]**

**Air Plan Approval and Air Quality Designation; MO; Redesignation of the Missouri Portion of the St. Louis Missouri-Illinois Area to Attainment of the 1997 Annual Standard for Fine Particulate Matter and Approval of Associated Maintenance Plan**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Advanced notice of proposed rulemaking.

**SUMMARY:** The Environmental Protection Agency (EPA) is issuing this Advanced Notice of Proposed Rulemaking (ANPR) to inform the public of currently available information that will be used by the Administrator to issue a subsequent action to propose redesignation of the Missouri portion of the St. Louis MO-IL nonattainment area for the 1997 PM<sub>2.5</sub> NAAQS, (hereafter referred to as the "St. Louis area" or "area"). On September 2, 2011, Missouri, through the Missouri Department of Natural Resources (MDNR) submitted a request for EPA to redesignate the Missouri portion of the St. Louis MO-IL nonattainment area to attainment for the 1997 Annual National Ambient Air Quality Standards (NAAQS) for fine particulate matter (PM<sub>2.5</sub>) and approve a state implementation plan (SIP) revision containing a maintenance plan

for the Missouri portion of the area. In advance of any potential rulemaking to address the state of Missouri's request, EPA is specifically requesting early input and comments on its interpretation that currently available data support a finding that the area will be attaining the 1997 Annual PM<sub>2.5</sub> NAAQS based on air quality monitoring data from 2015-2017, and on EPA's advanced notice of its expectation that the state's plan for maintaining the 1997 Annual PM<sub>2.5</sub> NAAQS for the St. Louis Area (maintenance plan) including the associated motor vehicle emission budgets (MVEBs) for nitrogen oxides (NO<sub>x</sub>) and PM<sub>2.5</sub> for the years 2008-2025 is approvable. EPA will take any information received from this ANPR into consideration when developing a proposed action for redesignating the Missouri portion of the St. Louis Area to attainment for the 1997 Annual PM<sub>2.5</sub> NAAQS

**DATES:** Comments must be received on or before **[insert date 30 days after date of publication in the Federal Register]**.

**ADDRESSES:** Submit your comments, identified by Docket ID No. EPA-R07-OAR-2017-0734 to <https://www.regulations.gov>. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from Regulations.gov. The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia

submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (i.e. on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <https://www2.epa.gov/dockets/commenting-epa-dockets>.

**FOR FURTHER INFORMATION, CONTACT:** Lachala Kemp, Environmental Protection Agency, Air Planning and Development Branch, 11201 Renner Boulevard, Lenexa, Kansas 66219 at (913) 551 7214, or by email at [kemp.lachala@epa.gov](mailto:kemp.lachala@epa.gov).

**SUPPLEMENTARY INFORMATION:** Throughout this document "we," "us," and "our" refer to EPA. This section provides additional information by addressing the following:

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### **I. What is the Purpose of this Advanced Notice of Proposed Rulemaking?**

The primary purpose of this Advanced Notice of Proposed Rulemaking or ANPR is to provide the public an opportunity to provide input on the EPA's approach and initial review of Missouri's request to redesignate the Missouri portion of the St. Louis bi-state nonattainment area to attainment for the 1997 PM<sub>2.5</sub> NAAQS. Once the 2015-2017 quality assured and certified air monitoring data for the entire bi-state nonattainment area is available, EPA intends to take action determining if the area has met the standard and if the state of Missouri has satisfied the other requirements for redesignating a nonattainment area to attainment as provided by the Clean Air Act (CAA or Act). Specifically, section 107(d)(3)(E) of the CAA allows for redesignation to attainment provided the following criteria are met: (1) the Administrator determines that the area has attained the applicable NAAQS, (2) the Administrator has fully approved

the applicable implementation plan for the area under CAA section 110(k), (3) the Administrator determines that the improvement in air quality is due to permanent and enforceable reductions in emissions resulting from implementation of the applicable SIP and applicable Federal air pollutant control regulations and other permanent and enforceable reductions, (4) the Administrator has fully approved a maintenance plan for the area as meeting the requirements of CAA section 175A, and (5) the state containing such area has met all requirements applicable to the area under section 110 and part D of title I of the CAA.

EPA has reviewed Missouri's submittal and additional information and recognizes that the state's information supports the St. Louis area's redesignation for the 1997 annual PM<sub>2.5</sub> NAAQS. Based on historical and air quality data collected for the majority of 2017, it is extremely likely the area will have an attaining design value based on 2015-2017 air quality data. Provided air quality data for the remainder of the 2017 calendar year continues to support a finding of attainment and EPA approves the emissions inventory submitted with the maintenance plan, EPA expects to approve the area's redesignation.

## **II. What Future EPA Action is Discussed in this Advanced Notice of Proposed Rulemaking?**

EPA is providing advanced notice on future actions related to Missouri's request that the Agency determine that the St. Louis bi-state nonattainment area for the 1997 annual PM<sub>2.5</sub> National Ambient Air Quality Standard attains the standard and the Agency officially redesignate the area from nonattainment to attainment. Missouri submitted their first request to determine attainment and redesignation on September 1, 2011. The state then supplemented and revised their request on March 31, 2014, and on September 17, 2014<sup>1</sup>. In this notice, when EPA refers to Missouri's submission, we are referring to information provided in the 2011 and 2014 submissions and the additional clarifying information together unless otherwise specified. EPA is providing advanced notice related to information that supports redesignation from nonattainment to attainment for the Missouri portion of the St. Louis area for the 1997 annual PM<sub>2.5</sub> NAAQS and evaluation of Missouri's 1997 annual PM<sub>2.5</sub> NAAQS maintenance plan, which includes the 2008 and 2025 NO<sub>x</sub> and PM<sub>2.5</sub> MVEBs for the St. Louis area. EPA evaluated Missouri's request and plan consistent with section 175A of the CAA and EPA's supplemental

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<sup>1</sup> The date of the original submission is September 2, 2011. Missouri supplemented and revised their request on March 31, 2014, September 17, 2014, and May 23, 2017. The May 27, 2017, letter requested EPA to take action on prior submission, but did not include additional documentation. EPA considered all submissions in reviewing and proposing this action.

analysis that the area will continue to maintain for ten years following redesignation. The Missouri counties comprising the St. Louis area are Franklin, Jefferson, St. Charles and St. Louis. The City of St. Louis is also part of the nonattainment area.

### **III. What is the Background for EPA's Advanced Notice?**

Fine particle pollution can be emitted directly or formed secondarily in the atmosphere. The main precursors of secondary PM<sub>2.5</sub> are sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), ammonia (NH<sub>3</sub>), and volatile organic compounds (VOC). *See, e.g.,* 72 FR 20586, 72 FR 20589. Sulfates are a type of secondary particle formed from SO<sub>2</sub> emissions of power plants and industrial facilities. Nitrates, another common type of secondary particle, are formed from NO<sub>x</sub> emissions of power plants, automobiles, and other combustion sources of fossil fuel.

On July 18, 1997, EPA promulgated the first air quality standards for PM<sub>2.5</sub>. 62 FR 38652. EPA promulgated an annual standard at a level of 15 micrograms per cubic meter (µg/m<sup>3</sup>), based on a three-year average of annual mean PM<sub>2.5</sub> concentrations. In the same rulemaking, EPA promulgated a 24-hour standard of 65 µg/m<sup>3</sup>, based on a three-year average of the 98<sup>th</sup> percentile of 24-hour concentrations. On October 17, 2006, at 71 FR 61144, EPA retained the annual average NAAQS at 15 µg/m<sup>3</sup> but revised the 24-hour NAAQS to 35 µg/m<sup>3</sup>, based again on the

three-year average of the 98<sup>th</sup> percentile of 24-hour concentrations.<sup>2</sup> Under EPA regulations at 40 CFR part 50, the primary and secondary 1997 annual PM<sub>2.5</sub> NAAQS are attained when the annual arithmetic mean concentration, as determined in accordance with 40 CFR part 50, appendix N, is less than or equal to 15.0 µg/m<sup>3</sup> at all relevant monitoring sites in the subject area over a three-year period.

On January 5, 2005, at 70 FR 944, and supplemented on April 14, 2005, at 70 FR 19844, EPA designated the St. Louis area as nonattainment for the 1997 PM<sub>2.5</sub> annual NAAQS. In that action, EPA defined the 1997 annual PM<sub>2.5</sub> St. Louis nonattainment area to include Jefferson, Franklin, St. Charles, and St. Louis Counties along with the City of St. Louis on the Missouri side, and Madison, Monroe, and St. Clair Counties as well as the Baldwin Township of Randolph County on the Illinois side of the nonattainment area.

On November 13, 2009, EPA promulgated designations for the 24-hour standard established in 2006, designating the St. Louis area as attainment for that NAAQS (74 FR 58688). That action clarified that the St. Louis area was classified as unclassifiable/attainment for the 1997 24-hour PM<sub>2.5</sub> NAAQS. EPA

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<sup>2</sup> In response to legal challenges of the annual standard promulgated in 2006, the United States Court of Appeals for the District of Columbia Circuit (D.C. Cir.) remanded that NAAQS to EPA for further consideration. *See American Farm Bureau Federation and National Pork Producers Council, et al. v. EPA*, 559 F.3d 512 (D.C. Cir. 2009). However, given that the 1997 and 2006 annual NAAQS are essentially identical, attainment of the 1997 annual NAAQS would also indicate attainment of the remanded 2006 annual NAAQS.

did not promulgate designations for the 2006 annual PM<sub>2.5</sub> NAAQS because that NAAQS was essentially identical to the 1997 annual PM<sub>2.5</sub> NAAQS, and today's action only addresses the 1997 annual PM<sub>2.5</sub> NAAQS designation.

All 1997 PM<sub>2.5</sub> NAAQS areas were designated under subpart 1. Subpart 1 contains the general requirements for nonattainment areas for any pollutant governed by a NAAQS and is less prescriptive than the other subparts of title I, part D. On April 25, 2007 (72 FR 20586), EPA promulgated its Clean Air Fine Particle Implementation Rule, codified at 40 CFR part 52, subpart Z, in which the Agency provided guidance for state and tribal plans to implement the 1997 PM<sub>2.5</sub> NAAQS. The D.C. Circuit remanded the Clean Air Fine Particle Implementation Rule and the final rule entitled "Implementation of the New Source Review (NSR) Program for Particulate Matter Less than 2.5 Micrometers (PM<sub>2.5</sub>)" (73 FR 28321, May 16, 2008) (collectively, "1997 PM<sub>2.5</sub> Implementation Rules") to EPA on January 4, 2013, in *Natural Resources Defense Council v. EPA*, 706 F.3d 428 (D.C. Cir. 2013). The Court found that EPA erred implementing the 1997 PM<sub>2.5</sub> NAAQS pursuant to the general implementation provisions of subpart 1, rather than the particulate matter-specific provisions of subpart 4.

On July 29, 2016, EPA issued a rule entitled, "Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements" (PM<sub>2.5</sub> SIP Requirements Rule) that clarifies how states should meet the statutory SIP requirements that apply to areas designated nonattainment for any PM<sub>2.5</sub> NAAQS under subparts 1 and 4. See 81 FR 58010 (August 24, 2016). It does so by establishing regulatory requirements and providing guidance that is applicable to areas that are currently designated nonattainment for existing PM<sub>2.5</sub> NAAQS and areas that are designated nonattainment for any PM<sub>2.5</sub> NAAQS in the future. In addition, the rule responds to the D.C. Circuit's remand of the 1997 PM<sub>2.5</sub> Implementation Rules. As a result, the requirements of the rule also govern future actions associated with states' ongoing implementation efforts for the 1997 and 2006 PM<sub>2.5</sub> NAAQS.

In the PM<sub>2.5</sub> SIP Requirements Rule, EPA revoked the 1997 primary Annual PM<sub>2.5</sub> NAAQS in areas that had always been attainment for that NAAQS, and in areas that had been designated as nonattainment but that were redesignated to attainment before October 24, 2016, the rule's effective date. See 81 FR 58010 (August 24, 2016). EPA also finalized a provision that revokes the 1997 primary Annual PM<sub>2.5</sub> NAAQS in areas that are redesignated to attainment for that NAAQS after October 24, 2016, effective on the effective date of the redesignation of

the area to attainment for that NAAQS. See 40 CFR 50.13(d). EPA is providing advanced notice of its expectation to redesignate the St. Louis area to attainment for the 1997 Annual PM<sub>2.5</sub> NAAQS and to approve the CAA 175A maintenance plan for the 1997 Annual PM<sub>2.5</sub> NAAQS in a future action, for the reasons described elsewhere in this advanced notice<sup>3</sup>. If the action is finalized, the 1997 primary Annual PM<sub>2.5</sub> NAAQS will be revoked in the Missouri portion of the St. Louis Area on the effective date of the redesignation. Beginning on that date, the Missouri portion of the St. Louis Area will no longer be subject to transportation or general conformity requirements for the 1997 Annual PM<sub>2.5</sub> NAAQS due to the revocation of the primary NAAQS. See 81 FR 58125. The Missouri portion of the St. Louis Area will be required to implement the CAA section 175A maintenance plan for the 1997 Annual PM<sub>2.5</sub> NAAQS and the prevention of significant deterioration (PSD) program for the 1997 Annual PM<sub>2.5</sub> NAAQS. Once approved, the maintenance plan can only be revised if the revision meets the requirements of CAA Section 110(1) and, if applicable CAA section 193. The Area would not be required to submit a second 10-year maintenance plan for the 1997 Annual PM<sub>2.5</sub> NAAQS. See 81 FR 58144.

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<sup>3</sup> CAA Section 175A(a) established the requirements that must be fulfilled by nonattainment areas in order to be redesignated to attainment. That section only requires that nonattainment areas for the *primary* standard submit a plan addressing maintenance of the *primary* NAAQS in order to be redesignated to attainment; it does not require nonattainment areas for secondary NAAQS to submit maintenance plans in order to be redesignated to attainment.

**IV. What is EPA's Initial Analysis of the State's Request?**

As stated above, EPA is providing advanced notice that in a future action it intends to formally act on Missouri's request to redesignate the Missouri portion of the St. Louis area to attainment for the 1997 annual PM<sub>2.5</sub> NAAQS and Missouri's plan for maintaining the 1997 Annual PM<sub>2.5</sub> NAAQS for the St. Louis portion of the area, including finding the associated MVEBs for 2008 and 2025 as adequate using criteria in 40 CFR 93.118(e) (4) and (5). EPA is issuing this advanced notice of proposed rulemaking because the information currently before the agency strongly supports a redesignation of the St. Louis area to attainment for the 1997 annual PM<sub>2.5</sub> NAAQS, with the exception of a small amount of air quality data for the 2017 calendar year, which EPA expects the states of Missouri and Illinois to certify in early 2018. Assuming, as EPA fully expects, that the remaining air quality data continue to support a finding that the area will have attained the 1997 standard based on monitoring data from 2015-2017, EPA intends to propose approval of Missouri's redesignation request for its portion of the St. Louis 1997 PM<sub>2.5</sub> nonattainment area. EPA's evaluation of whether Missouri's request for the area satisfies the five redesignation criteria provided under CAA section 107(d)(3)(E), based on currently available information, is discussed in greater detail in the following paragraphs of this section.

*Criteria (1) - Attainment of the 1997 annual PM<sub>2.5</sub> NAAQS*

For redesignating a nonattainment area to attainment, the CAA requires EPA to determine that the area has attained the applicable NAAQS (CAA section 107(d)(3)(E)(i)). An area's attainment of the 1997 annual PM<sub>2.5</sub> NAAQS is determined in accordance with 40 CFR 50.7 and appendix N of part 50, which requires three complete, consecutive calendar years of quality-assured air quality monitoring data. To attain this NAAQS, the three-year average of the annual arithmetic mean concentration, as determined in accordance with 40 CFR part 50, appendix N, must be less than or equal to 15.0 µg/m<sup>3</sup> at all relevant monitoring sites in the subject area over a three-year period. The relevant data must be collected and quality-assured in accordance with 40 CFR part 58 and recorded in the EPA Air Quality System (AQS) database.

On May 23, 2011, EPA determined that the St. Louis area was attaining the 1997 annual PM<sub>2.5</sub> NAAQS (76 FR 29652). In that action, EPA reviewed PM<sub>2.5</sub> monitoring data from monitoring stations in the area for the 1997 annual PM<sub>2.5</sub> NAAQS for 2007-2009. This data was quality-assured and recorded in AQS. The design value for 2007-2009 was 14.1 µg/m<sup>3</sup> for the St. Louis area which met the NAAQS. On June 27, 2012 (77 FR 38183), EPA also

finalized a determination that the St. Louis area attained the 1997 annual PM<sub>2.5</sub> NAAQS by the applicable attainment date of April 5, 2010.

In August of 2014, EPA Region 7 received notice that EPA Region 5 conducted a technical systems audit regarding the weighing of PM<sub>2.5</sub> samples in Illinois. The audit revealed that the Cook County Department of Environmental Control, which weighs all of the filters in Illinois' monitoring network, did not have the appropriate equipment for determining whether the laboratory conditions met the temperature and humidity criteria in 40 CFR 50 appendix L for proper conditioning of filters. The instantaneous temperature and humidity information collected during the audit suggested that many of the sample weighings failed to meet these criteria. As a result, no filter-based PM<sub>2.5</sub> site in Illinois has sufficient, valid Federal Reference Method (FRM) data from 2011 through 2013. EPA is aware that the monitors in the Illinois portion of the St. Louis area started recording valid data in AQS in the 3<sup>rd</sup> quarter of 2014 and that a valid annual mean can only be determined, to date, for the years 2015 and 2016 from those Illinois monitors. EPA completed a review of the recorded data from the entire nonattainment area from 2015, 2016, and the first two quarters of 2017 and believes that this data is indicative of air quality that will support a

finding that the area is attaining the 1997 PM<sub>2.5</sub> annual NAAQS based on 2015-2017 air quality monitoring data. Assuming the complete, quality assured data for 2017 continues to support that finding, EPA in a future action intends to take future action regarding Missouri's request to redesignate the Missouri portion of the St. Louis area to attainment for the 1997 annual PM<sub>2.5</sub> NAAQS.

To evaluate how likely it is that the area will have an attaining design value, once all air quality data for the 2017 calendar year is complete and certified, EPA calculated critical values that would be required for the area to be in violation of the NAAQS. EPA has calculated the critical values in two ways; for the entire year of 2017 and for the remaining two quarters of 2017. Table 1 provides the area's critical values. Both the annual and quarterly critical values greatly exceed recently recorded levels, indicating that it is extremely unlikely that the area's design value will be in violation of the NAAQS based on 2015-2017 air quality data. The data analysis of critical values in 2017 demonstrates that all the monitors should easily attain the PM<sub>2.5</sub> NAAQS as the critical values are well above what is currently measured or historically measured at any of the St. Louis PM<sub>2.5</sub> monitors.

**Table 1. Critical Values for the St. Louis Area for the 1997 annual PM<sub>2.5</sub> NAAQS (µg/m<sup>3</sup>)**

State	County	Monitor	AQS Site ID	2015	2016	2017 <sup>1</sup>	DV <sup>2</sup>	Critical Value <sup>3</sup>	Critical Value 3 <sup>rd</sup> /4 <sup>th</sup> Qtrs <sup>4</sup>
Missouri	St. Louis City	Blair Street (FRM)	29-510-0085	10.4	8.5	7.4	8.8	26.1	44.8
Missouri	St. Louis City	South Broadway	29-510-0007	11.1	8.1	7.0	8.7	25.8	44.6
Missouri	Jefferson	Arnold West	29-099-0019	11.6	8.3	8.0	9.3	25.1	42.2
Missouri	St. Louis County	Ladue	29-189-3001	10.3	8.7	9.2	9.4	26.0	42.8
Missouri	St. Louis City	Forest Park	29-510-0094	9.2	8.7	7.7	8.5	27.1	46.5
Illinois	Madison	Alton	17-119-2009	9.0	8.8	8.6	8.8	27.2	45.8
Illinois	Madison	Wood River	17-119-3007	9.1	8.7	8.2	8.7	27.2	46.2
Illinois	Madison	Granite City	17-119-1007	10.4	9.1	8.8	9.4	25.5	42.2
Illinois	St. Clair	East St. Louis	17-163-0010	10.7	10.0	8.3	9.7	24.3	40.3
Illinois	Jersey	Jerseyville	17-083-1001	7.7	7.9	8.9	8.2	29.4	49.9

<sup>1</sup> Only first 2 quarters of 2017 data are complete and reported to AQS

<sup>2</sup> 2015-2017 design values not yet valid since only the first 2 quarters of 2017 data being reported to AQS

<sup>3</sup> To determine the critical value for the 2012 NAAQS, and knowing that the average annual value over 3 years must be less than or equal to 15 µg/m<sup>3</sup>, EPA used the following formula  $(y_1 + y_2 + y_3) / 3 \leq 15$  solving for year 3 ( $y_3$ ). Where  $y_3 = 45 - y_1 - y_2$  is the critical value for  $y_3$  in the equation

<sup>4</sup> Having 2 quarters of data in 2017 ( $y_3$ ), EPA was able to determine how high the average of the last two quarters could be by utilizing the following formula  $(Q_{12} + Q_{34}) / 2 \leq \text{annual critical value}$  where  $Q_{34} \leq 2 * CV - Q_{12}$ .

If there is any indication that the area is not attaining the 1997 annual PM<sub>2.5</sub> NAAQS, EPA will not go forward with acting on Missouri's request to redesignate the area. MDNR has committed to continue monitoring in this area in accordance with 40 CFR part 58.

In summary, EPA is providing for the public's review the currently available air quality data, including all data submitted by Missouri to AQS, as well as EPA's analysis of the

critical values for both 2017 and the last two quarters of 2017 which indicate it is extremely likely that the area will have an attaining design value once the 2017 data are complete and quality-assured. EPA is requesting the public's comments and feedback on the data and analysis provided, and is providing advanced notice that it intends to use this information in support of a proposal for redesignation of the St. Louis area.

*Criteria (2) - the Area Has a Fully Approved SIP Under Section 110(k); and Criteria (5) - The Missouri Portion of the St. Louis Area Has Met All Applicable Requirements Under Section 110 and Part D of the CAA*

For redesignating a nonattainment area to attainment, the CAA requires EPA to determine that the state has met all applicable requirements under section 110 and part D of title I of the CAA (CAA section 107(d)(3)(E)(v)) and that the state has a fully approved SIP under section 110(k) for the area (CAA section 107(d)(3)(E)(ii)). EPA is providing advanced notice of its review of Missouri's redesignation and believes Missouri has submitted all applicable SIP requirements for purposes of redesignation for the Missouri portion of the St. Louis area under section 110 of the CAA (general SIP requirements) and part D of title I.

EPA has ascertained which requirements are applicable to the Missouri portion of the St. Louis area and, if applicable, determined that they are, or will be, fully approved through this action under section 110(k) of the CAA. See sections a) and b) below. EPA notes that SIPs must be fully approved only with respect to requirements that were due prior to submittal of the complete redesignation request.

a. The Missouri Portion of the St. Louis Area Has Met All Applicable Requirements for Purposes of Redesignation Under Section 110 and Part D of the CAA

*General SIP requirements.* Section 110(a)(2) of title I of the CAA delineates the general requirements for a SIP, which include enforceable emissions limitations and other control measures, means, or techniques; provisions for the establishment and operation of appropriate devices necessary to collect data on ambient air quality; and programs to enforce the limitations. General SIP elements and requirements are delineated in section 110(a)(2). These "infrastructure" requirements include, but are not limited to, the following: (1) submittal of a SIP that has been adopted by the state after reasonable public notice and hearing; (2) provisions for establishment and operation of appropriate procedures needed to monitor ambient air quality;

(3) implementation of a source permit program; provisions for the implementation of part C requirements (Prevention of Significant Deterioration (PSD)); (4) provisions for the implementation of part D requirements (Nonattainment New Source Review (NNSR) permit programs); (5) provisions for air pollution modeling; and (6) provisions for public and local agency participation in planning and emission control rule development.

EPA has long interpreted section 110(a)(2) elements that are neither connected with nonattainment plan submissions nor linked with an area's attainment status not to be applicable requirements for purposes of redesignation, under the theory that states were required to fulfill these obligations as to a particular NAAQS regardless of the designation status of any specific area. As noted above, this advanced notice of redesignation also has the effect of revoking the 1997 PM<sub>2.5</sub> NAAQS for the St. Louis Area, and thus the section 110(a)(2) general SIP requirements will no longer be in force for the 1997 standard upon the effective date of the redesignation. However, the 1997 standard was superseded by the more stringent 2012 PM<sub>2.5</sub> NAAQS, and all states are required to comply with section 110(a)(2) for that more stringent standard. The Missouri portion of the St. Louis area (and Missouri in general) continues to be subject to the section 110(a)(2) general SIP requirements for the more stringent 2012 PM<sub>2.5</sub> NAAQS notwithstanding the expected

redesignation and revocation. In any case, EPA has previously approved provisions of Missouri's SIP addressing CAA section 110(a)(2) requirements including provisions addressing the 1997 PM<sub>2.5</sub> NAAQS on May 8, 2007 (72 FR 25975), and June 21, 2013 (78 FR 37457). In summary, EPA does not interpret the section 110(a)(2) requirements to be applicable for purposes of redesignation under sections 107(d)(3)(E)(ii) and (v), and in any case those provisions have been fully approved.

*Part D Requirements.* EPA is providing advanced notice that upon final approval of the 2008 comprehensive emissions inventory discussed in section VII of this rulemaking, the Missouri SIP will meet the applicable SIP requirements for the Missouri portion of the St. Louis area for purposes of redesignation under part D of the CAA. Subpart 1 of part D, found in sections 171-179 of the CAA, sets forth the basic nonattainment requirements applicable to all nonattainment areas. For purposes of evaluating this redesignation request, the applicable part D, subpart 1 SIP requirements for all nonattainment areas are contained in sections 172(c)(1)-(9) and in section 176. A thorough discussion of the applicable requirements contained in section 172 can be found in the

General Preamble for Implementation of title I (57 FR 13498, April 16, 1992). In section V of this proposed rulemaking, EPA discusses the relationship between this proposed redesignation action and subpart 4 of part D.

*Subpart 1 section 172 Requirements:* Sections 172 to 175 of the CAA, set forth the basic nonattainment plan requirements applicable to PM<sub>2.5</sub> nonattainment areas. Under CAA section 172, states with nonattainment areas must submit plans providing for timely attainment and meet a variety of other requirements. On May 23, 2011 (76 FR 29652), EPA made a determination that the St. Louis area had attained the 1997 annual PM<sub>2.5</sub> NAAQS. This determination was based upon complete, quality-assured, and certified ambient air monitoring data that showed that the area monitored attainment of the 1997 annual PM<sub>2.5</sub> NAAQS during the 2007-2009 monitoring period. Pursuant to 40 CFR 51.1004(c), upon determination by EPA that an area designated nonattainment for the PM<sub>2.5</sub> NAAQS has attained the standard, the requirement for such an area to submit an attainment demonstration and associated reasonably achievable control technology (RACT)/reasonably achievable control measures (RACM), a reasonable further progress (RFP) plan, contingency measures, and other planning SIPs related to the attainment of the PM<sub>2.5</sub> NAAQS are suspended until the area is redesignated to attainment or EPA determines that the area has violated the PM<sub>2.5</sub> NAAQS, at

which time such plans are again required to be submitted. As a result of the determination of attainment, the only remaining requirement under CAA section 172 to be considered is the emissions inventory required to be submitted and approved by EPA under CAA section 172(c)(3).

In this advanced notice, as discussed further in section VI, EPA is providing advanced notice of Missouri's 2008 base year emissions inventory and intends to approve the emissions inventory in a future action in accordance with section 172(c)(3) of the CAA.<sup>4</sup> Because Missouri withdrew their nonattainment SIP submittal, which included the 2002 baseyear emissions inventory after EPA finalized the Clean Data Determination (76 FR 29652) for the Missouri portion of the St. Louis nonattainment area in 2011, EPA believes the 2008 base year emissions inventory is an appropriate baseyear emissions inventory requirement under section 172(c)(3) of the CAA. For more information on EPA's analysis of the 2008 base year emissions inventory, see EPA's "Emissions Inventory and Motor Vehicle Emissions Budget (MVEB) Technical Support Document (TSD) for the Redesignation Request and Maintenance Plan for the St Louis, Missouri 1997 PM<sub>2.5</sub> Nonattainment Area", available online at [www.regulations.gov](http://www.regulations.gov), Docket ID No. EPA-R07-OAR-2017-0734.

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<sup>4</sup> EPA's longstanding guidance on redesignations, entitled "Processing Redesignations to Attainment," John Calcagni 1992, notes that the subpart 1 emissions inventory requirement is satisfied by the maintenance plan inventory requirements.

The General Preamble for Implementation of title I also discusses the evaluation of these requirements in the context of EPA's consideration of a redesignation request. The General Preamble sets forth EPA's view of applicable requirements for purposes of evaluating redesignation requests when an area is attaining the standard. See General Preamble for Implementation of title I (57 FR 13498, April 16, 1992).

Because attainment has been reached for the area, no additional measures are needed for attainment, and CAA section 172(c)(1) requirements for an attainment demonstration and RACT/RACM are no longer considered to be applicable for purposes of redesignation as long as the area continues to attain the standard until redesignation. See 40 CFR 51.1004(c). The RFP requirement under CAA section 172(c)(2) and contingency measures requirement under CAA section 172(c)(9) are similarly not relevant for purposes of redesignation.

Section 172(c)(4) of the CAA requires the identification and quantification of allowable emissions for new and modified major stationary sources in an area, and CAA section 172(c)(5) requires source permits for the construction and operation of new and modified major stationary sources anywhere in the nonattainment area. EPA has determined that, since the PSD requirements will apply after redesignation, areas being redesignated need not comply with the requirement that a

nonattainment NSR (NNSR) program be approved prior to redesignation, provided that the area demonstrates maintenance of the NAAQS without part D NSR. A more detailed rationale for this view is described in a memorandum from Mary Nichols, Assistant Administrator for Air and Radiation, dated October 14, 1994, entitled, "Part D New Source Review Requirements for Areas Requesting Redesignation to Attainment." Nevertheless, Missouri currently has an approved NNSR program and Missouri's PSD program for the 1997 annual PM<sub>2.5</sub> NAAQS will become effective in the Missouri portion of the St. Louis area upon redesignation to attainment.

Section 172(c)(6) of the CAA requires the SIP to contain control measures necessary to provide for attainment of the NAAQS. Because attainment has been reached for the Missouri portion of the St. Louis area, no additional measures are needed to provide for attainment.

Section 172(c)(7) of the CAA requires the SIP to meet the applicable provisions of CAA section 110(a)(2). As noted previously, we believe the Missouri SIP meets the requirements of CAA section 110(a)(2) that are applicable for purposes of redesignation.

*Subpart 1 Section 176 Conformity Requirements.* Section 176(c) of the CAA requires states to establish criteria and procedures to ensure that Federally supported or funded projects conform to the air quality planning goals in the applicable SIP. The requirement to determine transportation conformity applies to transportation plans, programs, and projects developed, funded or approved under Title 23 of the United States Code (U.S.C.) and the Federal Transit Act (transportation conformity) as well as to all other Federally supported or funded projects (general conformity). EPA approved the most recent revisions to the transportation conformity SIP for the Missouri portion of the St. Louis area on August 29, 2013 (78 FR 53247).

Thus, for purposes of redesignating the Missouri portion of the St. Louis area to attainment, EPA is providing advanced notice of our determination and believes Missouri has satisfied all applicable requirements for purposes of redesignation for the Missouri portion of the St. Louis area under CAA section 110, and upon final approval of the 2008 base year emissions inventory, also will have satisfied all applicable requirements under part D of title I of the CAA.

*Subpart 4 Requirements.* As discussed above, in *NRDC v. EPA*, the Circuit held that EPA should have implemented the 1997 PM<sub>2.5</sub> NAAQS pursuant to the particulate matter-specific provisions of subpart 4. On remand, EPA identified all areas designated

nonattainment for either the 1997 or the 2006 PM<sub>2.5</sub> NAAQS, including the St. Louis Area, as moderate nonattainment areas for purposes of Subpart 4 in the Classification and Deadlines Rule. Moderate nonattainment areas are subject to the requirements of sections 189(a), (c), and (e), including: (1) An approved permit program for construction of new and modified major stationary sources (section 189(a)(1)(A)); (2) an attainment demonstration (section 189(a)(1)(B)); (3) provisions for RACM (section 189(a)(1)(C)); (4) quantitative milestones demonstrating RFP toward attainment by the applicable attainment date (section 189(c)); and (5) precursor control (section 189(e)).<sup>14</sup>

With respect to the specific attainment planning requirements under subpart 4,<sup>5</sup> EPA applies the same interpretation that it applies to attainment planning requirements under Subpart 1 or any of the other pollutant-specific subparts. That is, under its long-standing interpretation of the CAA, where an area is already attaining the standard, EPA does not consider those attainment planning requirements to be applicable for purposes of evaluating a request for redesignation, that is, CAA section 107(d)(3)(E)(ii) or (v), because requirements that are designed to help an area

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<sup>5</sup> These planning requirements include the attainment demonstration, quantitative milestone requirements, and RACM analysis.

achieve attainment no longer have meaning where an area is already meeting the standard. EPA has proposed to determine that the area has attained the 1997 Annual PM<sub>2.5</sub> Standard. Therefore, under its longstanding interpretation, EPA is providing advance notice that the requirements to submit an attainment demonstration under section 189(a)(1)(B) and a RFP demonstration under section 189(c)(1) are not applicable for purposes of evaluating Missouri's redesignation request.

The permit requirements of subpart 4, contained in section 189(a)(1)(A), refer to and apply the subpart 1 permit provisions requirements of sections 172 and 173 to PM<sub>10</sub>, without adding to them. Consequently, EPA believes that section 189(a)(1)(A) does not itself impose for redesignation purposes any additional requirements for moderate areas beyond those contained in subpart 1.<sup>6</sup> As discussed above, EPA has long relied on the interpretation that a fully approved nonattainment new source review program is not considered an applicable requirement for redesignation, provided the area can maintain the standard with a PSD program after redesignation. A detailed rationale for this view is described in the Nichols Memorandum. *See also*

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<sup>6</sup> The potential effect of section 189(e) on section 189(a)(1)(A) for purposes of evaluating this redesignation is discussed below.

rulemakings for the Illinois portion of the St. Louis Area (77 FR 34819, 77 FR 34826, June 12, 2012); Louisville, Kentucky (66 FR 53665 - 66 FR 53669, October 23, 2001); Grand Rapids, Michigan (61 FR 31831, 61 FR 31834 - 61 FR 31837, June 21, 1996); Cleveland-Akron-Lorain, Ohio 61 FR 20458, 61 FR 20469 - 61 FR 20470, May 7, 1996); Detroit, Michigan (60 FR, 12467 - 60 FR 12468, March 7, 1995).

*Subpart 4 and the Control of PM<sub>2.5</sub> Precursors.* CAA section 189(e) provides that control requirements for major stationary sources of direct PM<sub>10</sub> (including PM<sub>2.5</sub>) shall also apply to PM precursors from those sources, except where EPA determines that major stationary sources of such precursors "do not contribute significantly to PM<sub>10</sub> levels which exceed the standard in the area." The CAA does not explicitly address whether it would be appropriate to include a potential exemption from precursor controls for all source categories under certain circumstances. In implementing subpart 4 with regard to controlling PM<sub>10</sub>, EPA permitted states to determine that a precursor was "insignificant" where the state could show in its attainment plan that it would expeditiously attain without adoption of emission reduction measures aimed at that precursor. This approach was upheld in *Association of Irrigated Residents v. EPA*, 423 F.3d 989 (9th Cir. 2005) and extended to PM<sub>2.5</sub> implementation in the PM Implementation Rule. A state may

develop its attainment plan and adopt reasonably available control measures that target only those precursors that are necessary to control for purposes of timely attainment. See 81 FR 58020. In the rule, EPA also finalized application of 189(e) to the NNSR permitting program, requiring states to determine whether a new major source of a precursor might have a significant contribution to air quality before allowing exemption of controls of a precursor from a new major stationary source or major modification in the text of that program. See 81 FR 58026.

Therefore, because the requirement of section 189(e) is primarily actionable in the context of addressing precursors in an attainment plan and in NNSR permitting, a precursor exemption analysis under section 189(e) and EPA's implementing regulations is not an applicable requirement that needs to be fully approved in the context of a redesignation under CAA section 107(d)(3)(E)(ii). As discussed above, for areas that are attaining the standard, EPA does not interpret attainment planning requirements of subparts 1 and 4 to be applicable requirements for the purposes of redesignating an area to attainment nor does it interpret NNSR to be an applicable requirement if the area can maintain the NAAQS with a PSD program after redesignation. However, to the extent that Missouri is required to conduct a precursor exemption analysis in order

to satisfy 189(e) in the context of its RACM determination for the St. Louis Area, which is required pursuant to the Sixth Circuit's decision in *Sierra Club*, EPA proposes to find that the requirements of section 189(e), as interpreted by EPA's regulations, are met in this case. The area has attained the 1997 Annual PM<sub>2.5</sub> NAAQS, and therefore, no additional controls of any pollutant, including any PM<sub>2.5</sub> precursors, are necessary to bring the area into attainment.<sup>7</sup> For these reasons, EPA is providing advance notice that it believes Missouri has satisfied all applicable requirements for purposes of redesignation of its portion of the St. Louis area under section 110 and part D of the CAA.

b. The Missouri Portion of the St. Louis Area has a Fully Approved Applicable SIP Under Section 110(k) of the CAA

Upon final approval of the comprehensive emissions inventory in a future notice, EPA will have fully approved the state's SIP for the Missouri portion of the St. Louis area for the 1997 annual PM<sub>2.5</sub> nonattainment area under section 110(k) of the CAA for all requirements applicable for purposes of redesignation. EPA may rely on prior SIP approvals in approving

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<sup>7</sup>The Missouri portion the St. Louis area contains no major stationary sources of ammonia, and existing major stationary sources of VOC are adequately controlled under other provisions of the CAA regulating the ozone NAAQS. The St. Louis area has reduced VOC emissions through the implementation of various control programs including VOC Reasonably Available Control Technology regulations and various on-road and non-road motor vehicle control programs.

a redesignation request (see Calcagni Memorandum at p. 3; *Southwestern Pennsylvania Growth Alliance v. Browner*, 144 F.3d 984, 989-90 (6<sup>th</sup> Cir. 1998); *Wall*, 265 F.3d 426 (6<sup>th</sup> Cir. 2001, upholding this interpretation)) plus any additional measures it may approve in conjunction with a redesignation action (see 68 FR 25426 (May 12, 2003) and citations therein). Following passage of the CAA of 1970, Missouri has adopted and submitted, and EPA has fully approved at various times, provisions addressing the various SIP elements applicable for the 1997 annual PM<sub>2.5</sub> NAAQS in the St. Louis area (e.g., 78 FR 37457, June 21, 2013).

As indicated above, EPA believes that the section 110 elements not connected with nonattainment plan submissions and not linked to the area's nonattainment status are not applicable requirements for purposes of redesignation. EPA has previously approved all part D subpart 1 requirements applicable for purposes of this redesignation.

*Criteria (3) - The Air Quality Improvement Is Due to Permanent and Enforceable Reductions in Emissions Resulting From Implementation of the SIP and Applicable Federal Air Pollution Control Regulations and Other Permanent and Enforceable Reductions (Section 107(d)(3)(E)(iii))*

For redesignating a nonattainment area to attainment, section 107(d)(3)(E)(iii) of the CAA requires EPA to determine that the air quality improvement in the area is due to permanent and enforceable reductions in emissions resulting from implementation of the SIP and applicable Federal air pollution control regulations and other permanent and enforceable reductions. EPA is providing advanced notice that it believes that Missouri has demonstrated that the observed air quality improvement in the St. Louis area is due to permanent and enforceable reductions in emissions resulting from implementation of the SIP, Federal measures, and other state adopted measures discussed below.

In making this demonstration, MDNR has calculated the change in emissions from a nonattainment year inventory to an attainment year inventory. For the nonattainment inventory, Missouri developed a 2002 base year emissions inventory, which the state subsequently withdrew once a Clean Data Determination was finalized for the Missouri portion of the St. Louis nonattainment area. For purposes of their redesignation request, Missouri developed a baseyear emissions inventory for 2008, one of the years the St. Louis area monitored attainment of the standard. See section b. below for discussion on development of these inventories. The reduction in emissions and the corresponding improvement in air quality over this time period

can be attributed to a number of permanent and enforceable regulatory control measures that St. Louis and upwind areas have implemented in recent years.

a. Permanent and Enforceable Controls Implemented

The following is a discussion on the permanent and enforceable measures that have been implemented in the area<sup>8</sup>. Reductions in PM<sub>2.5</sub> precursor emissions have occurred statewide and in upwind areas as a result of Federal emission control measures, with additional emission reductions expected to occur in the future. Federal emission control measures include the following:

*Tier 2 vehicle standards and low-sulfur gasoline.*

Implementation of the Tier 2 vehicle standards began in 2004, and as newer, cleaner cars enter the national fleet, these standards continue to significantly reduce NO<sub>x</sub> emissions. The standards require all classes of passenger vehicles in any manufacturer's fleet to meet an average standard of 0.07 grams of NO<sub>x</sub> per mile. In addition, starting in January of 2006, the Tier 2 rule reduced the allowable sulfur content of gasoline to 30 parts per million (ppm). Most gasoline sold prior to this had a sulfur content of approximately 300 ppm. EPA expects that these

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<sup>8</sup> It should be noted that the mobile source controls discussed below also provide reductions in VOC and/or SO<sub>2</sub> emissions. While those emissions may be reduced, the submitted maintenance plan and redesignation request do not rely on these emission reductions.

standards will reduce NO<sub>x</sub> emissions from vehicles by approximately 74 percent by 2030, translating to nation-wide reductions of nearly 3 million tons annually by 2030.

*Heavy-duty gasoline and diesel highway vehicle standards and ultra-low-sulfur diesel rule.* On October 6, 2000, EPA promulgated a rule to reduce NO<sub>x</sub> and VOC emissions from heavy-duty gasoline and diesel highway vehicles that began to take effect in 2004 (65 FR 59896). On January 18, 2001, (66 FR 5002) EPA promulgated a second phase of standards and testing procedures began in 2007 to reduce particulate matter from heavy-duty highway engines, and reduce highway diesel fuel sulfur content to 15 ppm since the sulfur in fuel damages high efficiency catalytic exhaust emission control devices. The total program is estimated to achieve a ninety percent reduction in PM<sub>2.5</sub> emissions and a ninety-five percent reduction in NO<sub>x</sub> emission for new engines using low-sulfur diesel fuel, compared to existing engines using higher-content sulfur diesel fuel. EPA expects that this rule will reduce NO<sub>x</sub> emissions by 2.6 million tons nation-wide by 2030 when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.

*Tier 4 Non-Road Diesel Engine Rule.* This rule, which applies to diesel engines used in industries such as construction, agriculture, and mining, was promulgated in 2004

and fully phased in 2014. This rule reduced allowable non-road diesel fuel sulfur levels from approximately 3,000 ppm to 500 ppm in 2007 and further reduced those levels to 15 ppm starting in 2010 (a 99 percent reduction). This rule also achieved significant reductions for up to 90 percent for NO<sub>x</sub> and particulate matter emissions nationwide.

*Nonroad Large spark-ignition engines and recreational engines standards.* The nonroad spark-ignition and recreational engine standards, effective in July 2003, regulate NO<sub>x</sub>, and hydrocarbons, and carbon monoxide from groups of previously unregulated non-road engines. (67 FR 68242). These engine standards apply to large spark-ignition engines (e.g., forklifts and airport ground service equipment), recreational vehicles (e.g., off-highway motorcycles and all-terrain-vehicles), and recreational marine diesel engines sold in the United States and imported after the effective date of these standards.

When all of the nonroad spark-ignition and recreational engine standards are fully implemented, an overall seventy-two percent reduction in hydrocarbons, eighty percent reduction in NO<sub>x</sub>, and fifty-six percent reduction in carbon monoxide emissions is expected by 2020. These controls will help reduce ambient concentrations of fine particulate matter.

Tier 3 Motor Vehicles Emission and Fuel Standards: On April 24, 2014 (79 FR 23414), EPA finalized a rule designed to reduce air pollution from passenger cars and trucks. The vehicle emissions standard began in 2017, and combined with the reduction of gasoline sulfur content will significantly reduce motor vehicle emissions including NO<sub>x</sub>, VOC, PM<sub>2.5</sub>, Carbon Monoxide and air toxics by 2030, which will help the area maintain the 1997 PM<sub>2.5</sub> annual NAAQS.

*NO<sub>x</sub> SIP Call.* On October 27, 1998 (63 FR 57356), EPA issued the NO<sub>x</sub> SIP Call pursuant to the CAA to require twenty-two states and the District of Columbia to reduce NO<sub>x</sub>, a precursor to ozone and PM<sub>2.5</sub> pollution, and providing a mechanism (the NO<sub>x</sub> Budget Trading Program) that states could use to achieve those reductions. Affected states were required to comply with Phase I of the SIP Call beginning in 2004, and Phase II beginning in 2007. By the end of 2008, ozone season NO<sub>x</sub> emissions from sources subject to the NO<sub>x</sub> SIP Call dropped by sixty-two percent from 2000 emissions levels. All NO<sub>x</sub> SIP Call states have SIPs that currently satisfy their obligations under the NO<sub>x</sub> SIP Call, and the emission reductions required under the SIP Call are permanent and enforceable.

As part of the NO<sub>x</sub> SIP Call, the eastern third of Missouri was required to comply with Phase II of the program. In response, Missouri developed rules governing the control of NO<sub>x</sub>

emissions from EGUs, major non-EGU industrial boilers, major cement kilns, and large internal combustion engines. EPA approved Missouri's Phase II NO<sub>x</sub> SIP Call rules on August 15, 2006 (71 FR 46860). Implementation of the Phase II rules was projected to result in an eighty-two percent NO<sub>x</sub> reduction from 1995 levels. Missouri rules which address the NO<sub>x</sub> SIP call include:

- 10 CSR 10-6.350, "*Emissions limitations and Emissions Trading of Oxides of Nitrogen*"
- 10 CSR 10-6.360, "*Controlling NO<sub>x</sub> Emissions From Electric Generating Units and Non-Electric Generating Boilers*"
- 10 CSR 10-6.380, "*Control of NO<sub>x</sub> Emissions From Portland Cement Kilns*"
- 10 CSR 10-6.390, "*Control of NO<sub>x</sub> Emissions From Large Stationary Internal Combustion Engines*"

*Clean Air Interstate Rule (CAIR) and the Cross State Air Pollution Rule (CSAPR).* The Clean Air Interstate Rule (CAIR) was promulgated in 2005 and required twenty-eight eastern states and the District of Columbia to significantly reduce emissions of SO<sub>2</sub> and NO<sub>x</sub> from electric generating units (EGUs) in order to limit the interstate transport of these pollutants and the ozone and fine particulate matter these pollutants form in the atmosphere. 70 FR 25162 (May 12, 2005). In 2008, the D.C. Circuit initially vacated CAIR and ordered EPA to replace CAIR in its entirety, *North Carolina v. EPA*, 531 F.3d 896 (D.C. Cir. 2008), but ultimately remanded the rule to EPA without vacatur in order to preserve the environmental benefits provided by CAIR, *North*

*Carolina v. EPA*, 550 F.3d 1176, 1178 (D.C. Cir. 2008). On August 8, 2011, acting on the Court's remand, EPA promulgated CSAPR in order to replace CAIR and address interstate transport of emissions and the resulting secondary formation of ozone and fine particulate matter (76 FR 48208)<sup>9</sup>. CSAPR requires substantial reductions of SO<sub>2</sub> and NO<sub>x</sub> emissions from EGUs in twenty-eight states in the eastern United States. As a general matter, because CSAPR is CAIR's replacement, emissions reductions associated with CAIR will for most areas be made permanent and enforceable through implementation of CSAPR.

Implementation of the rule was scheduled to begin on January 1, 2012, when CSAPR's cap-and-trade programs would have superseded the CAIR cap-and-trade programs. Numerous parties filed petitions for review of CSAPR in the D.C. Circuit and on August 21, 2012, the court issued its ruling vacating and remanding CSAPR to EPA and ordering continued implementation of CAIR. *EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7, 38 (D.C. Cir. 2012). The D.C. Circuit's vacatur of CSAPR was reversed by the United States Supreme Court on April 29, 2014, and the case was remanded to the D.C. Circuit to resolve remaining issues in accordance with the Supreme Court's ruling. *EPA v. EME Homer City Generation, L.P.*, 134 S. Ct. 1584 (2014).

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<sup>9</sup> CAIR addressed the 1997 PM<sub>2.5</sub> annual standard and the 1997 8-hour ozone standard. CSAPR addresses contributions from upwind states to downwind nonattainment and maintenance of the 2006 24-hour PM<sub>2.5</sub> standard as well as the ozone and PM<sub>2.5</sub> NAAQS addressed by CAIR.

On remand, the D.C. Circuit affirmed CSAPR in most respects, but invalidated without vacating some of the CSAPR budgets as to a number of states. *EME Homer City Generation, L.P. v. EPA*, 795 F.3d 118. (D.C. Cir. 2015) (*EME Homer City II*). The CSAPR budgets for Missouri are not affected by the Court's decision. The litigation over CSAPR ultimately delayed implementation of that rule for three years, from January 1, 2012, when CSAPR's cap-and-trade programs were originally scheduled to replace the CAIR cap-and-trade programs, to January 1, 2015. Thus, the rule's Phase 2 budgets were originally promulgated to begin on January 1, 2014, but began on January 1, 2017.

As noted above, CAIR was promulgated in 2005 and incentivized early reductions from sources in all covered states, including those upwind of the St. Louis area. On December, 14, 2007, EPA approved Missouri's CAIR rules into the SIP and the state's CAIR rules became effective in 2009 (72 FR 71073). The Missouri rule written to comply with the NO<sub>x</sub> SIP Call requirements for EGUs was replaced with the CAIR NO<sub>x</sub> regulations, 10 CSR 10-6.362, *Clean Air Interstate Rule Annual NO<sub>x</sub> Trading program* and 10 CSR 10-6.364, *Clean Air Interstate Rule Seasonal NO<sub>x</sub> Trading program*, and include limits for non-EGU boilers, specifically Trigen Units 5 and 6 and Anheuser Busch Unit 6.

However, these three units have all been retired, and received retired unit exemptions that prohibit these units from operating.

Missouri's SIP redesignation request lists CAIR as a control measure. CAIR was in effect and achieving emission reductions in Missouri when the St. Louis area began monitoring attainment of the 1997 annual PM<sub>2.5</sub> NAAQS. The quality-assured, certified monitoring data used to demonstrate the area's attainment of the 1997 annual PM<sub>2.5</sub> NAAQS by the April 5, 2010, attainment deadline was influenced by reductions achieved by CAIR. Furthermore, because PM<sub>2.5</sub> concentrations in the St. Louis area are likely impacted by the transport SO<sub>2</sub> and NO<sub>x</sub> emissions produced upwind, the area's air quality is likely affected by regulation of emissions from power plants in other states.

On November 21, 2014, the Administrator signed an action that published in the **Federal Register** on December 3, 2014 (79 FR 71163), amending the regulatory text of CSAPR to reflect the Court's October 23, 2014, order tolling all deadlines in CSAPR by three years, including provisions governing the sunset of CAIR. CAIR therefore sunset at the end of 2014 and was replaced by CSAPR beginning January 1, 2015, which continue to remain in place. Relative to CAIR, CSAPR required similar or greater emission reductions from relevant upwind areas starting in 2015 and beyond, and Missouri's emissions budgets were not affected

by the Court's remand of some of the ozone-season and SO<sub>2</sub> budgets. The emission reductions associated with CAIR that helped the St. Louis area achieve attainment of the 1997 annual PM<sub>2.5</sub> NAAQS can therefore be considered permanent and enforceable for purposes of redesignation under section 107(d)(3)(E)(iii) of the CAA.

*State and Local Measures.* In addition to the above Federal measures, Missouri has several other state regulations that provide permanent and enforceable controls for PM<sub>2.5</sub> and PM<sub>2.5</sub> precursor emissions in the St. Louis area. These SIP approved rules include:

- 10 CSR 10-6.405 *"Restriction of Particulate Matter Emissions from Fuel Burning Equipment Used for Indirect Heating"*
- 10 CSR 10-5.040 *"Use of Fuel in Hand-Fired Equipment Prohibited"*
- 10 CSR 10-5.070 *"Open Burning Restrictions"*
- 10 CSR 10-6.170 *"Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin"*
- 10 CSR 10-6.220 *"Restriction of Emission of Visible Air Contaminants"*
- 10 CSR 10-6.260 *"Restriction of Emission of Sulfur Compounds"*
- 10 CSR 10-6.330 *"Restriction of Emissions from Batch-Type Charcoal Kilns"*
- 10 CSR 10-6.400 *"Restriction of Emission of Particulate Matter from Industrial Processes"*

*Vehicle Inspection and Maintenance Program.* To meet nonattainment area requirements for the one-hour ozone standard, Missouri implemented an inspection and maintenance program

beginning in 2000 in the counties of St. Louis, St. Charles, and Jefferson and the City of St. Louis. Missouri codified the program through state rule 10 CSR 10-5.380, "*Motor Vehicle Emissions Inspection*," and EPA approved an additional revision this rule on May 12, 2003 (68 FR 25414). While this program was established to address ozone formation, the reduction in NO<sub>x</sub> emissions impact PM<sub>2.5</sub> in this area. The mobile source emissions inventory projections used in this demonstration incorporates the inspection and maintenance program rule, 10 CSR 10-5.381, which replaced the 10-5.380 rule. The state has implemented 10 CSR 10-5.381 since 2007 and EPA approved this rule in 80 FR 11323, March 3, 2015.

*Permanent and Enforceable Controls Used to Attain the Standard for the Illinois portion of the nonattainment area.* The same Federal control measures listed above for the Missouri side of the area are also applicable to the Illinois side of the St. Louis area (defined as Madison, Monroe, and St. Clair Counties as well as the Baldwin Township of Randolph County). These include the Federal mobile source measures and Federal upwind trading programs. Illinois also operates an Inspection/Maintenance (I/M) program, and has adopted a state rule to control NO<sub>x</sub> and SO<sub>2</sub> from EGUs. Illinois also has a number of other state regulations in place to control PM<sub>2.5</sub> and PM<sub>2.5</sub> precursors. Additional information regarding NO<sub>x</sub> and VOC

emissions controls for the Illinois portion of the area can be found in the Illinois maintenance plan for the nonattainment area under the 1997 ozone standard. See docket ID EPA-R05-OAR-2010-0523; FRL-9619-8 for more information.

b. Emission Reductions.

The St. Louis area attained the 1997 annual  $PM_{2.5}$  NAAQS based on monitoring data for the three-year period from 2007-2009. During the development of the nonattainment SIP, which was subsequently withdrawn by the state, MDNR selected 2002 as the baseyear and since then has selected 2008 as the attainment emission inventory year. The attainment inventory identifies a level of emissions in the area that is sufficient to attain the 1997 annual  $PM_{2.5}$  NAAQS for direct  $PM_{2.5}$  and the  $PM_{2.5}$  precursors  $SO_2$ ,  $NO_x$ ,  $NH_3$  and VOC. Point source information was compiled from the 2008 NEI and the annual emissions reports submitted to MDNR by sources and EPA's Clean Air Markets Division database for electric utilities. Area, nonroad and onroad attainment year inventories originated from the 2008 NEI v1.5 provided by EPA. For more information on EPA's analysis of the 2002 and 2008 emissions inventories, see EPA's "Emissions Inventory and Motor Vehicle Emissions Budget (MVEB) Technical Support Document (TSD)

for the Redesignation Request and Maintenance Plan for the St. Louis, Missouri 1997 PM<sub>2.5</sub> Nonattainment Area," or appendix B, E and F of the state submittal, available on line at [www.regulations.gov](http://www.regulations.gov), Docket ID No. EPA-R07-OAR-2017-0734.

Using the inventory described above, as well as emissions inventories provided by Illinois, Missouri has documented changes in emissions from 2002 NEI to 2008 for the St. Louis area as shown in table 3 below. This table demonstrates that the entire St. Louis area has reduced emissions during the period except as described below.

**Table 3. Comparison of 2002 NEI and 2008 Baseyear Inventory for the St. Louis Nonattainment Area (tpy)**

County Name	Source Category	NH <sub>3</sub>	NO <sub>x</sub>	PM <sub>2.5</sub> -Pri	SO <sub>2</sub>	VOC
Missouri	Point Sources	-7.11	-13,095.20	-1,113.84	+44,701.42	-6,569.97
Illinois		164.12	-17,471.79	+134.22	-3,811.29	-816.76
Totals		157.01	-30,566.99	-979.62	+40,890.13	-7,386.76
Missouri	Area Sources	-453.09	-5,546.29	-799.57	-5,721.41	-7,169.82
Illinois		-433.02	-1,967.73	-2,757.16	-141.18	-16,890.58
Totals		-886.11	-7,514.02	-3,556.73	-5,862.59	-24,060.40
Missouri	On-Road Mobile Sources	-177.76	-31,503.01	-631.79	-1,452.91	-18,830.40
Illinois		6.88	-4,646.94	-102.62	-556.81	-2,555.87
Totals		-170.88	-36,149.95	-734.41	-2,009.72	-21,386.27
Missouri	Off-Road Mobile Sources	+5.84	-6,714.58	-386.84	-1,531.01	-3,962.38
Illinois		-1.24	+1,063.95	+33.13	-93.56	131.75
Totals		+4.60	-5,650.63	-353.71	-1,624.57	-3,830.63
Missouri Totals		-632.13	-56,859.08	-2,932.04	+35,996.09	-36,532.57
Illinois Totals		-263.26	-23,022.51	-2,692.43	-4,602.84	-20,131.46
Grand Total		-895.39	-79,881.59	-5,624.47	+31,393.25	-56,664.03

There is an increase of total SO<sub>2</sub> emissions from 2002 to 2008 of 35,996.09 tons on the Missouri side of the nonattainment area. This increase is a result of two factors described below.

First, over 20,700 tons of the SO<sub>2</sub> increase can be attributed to a change in emission factors between 2002 and 2008 for the Doe Run Primary Lead Smelter in Herculaneum, MO, but that source has since shut down<sup>10</sup>. The second factor which contributes to the increase in SO<sub>2</sub> emissions is a ten percent increase in electricity demand at four Missouri EGUs. Between 2002 and 2008 a 10 percent increase in electricity demand coupled with increases in SO<sub>2</sub> emission rates from the Ameren utilities lead to increasing SO<sub>2</sub> emissions between 2002 and 2008. Overall emissions from 2002 to 2008 are trending down for direct PM<sub>2.5</sub> and the three other PM<sub>2.5</sub> precursors and EPA believes that the effect of these decreases cumulatively outweigh the increase seen in SO<sub>2</sub> emissions during the same time, thus supporting EPA's position set forth in this ANPR. In addition, in the years following 2008, substantial SO<sub>2</sub> reductions have been realized in the St. Louis utility sector within the nonattainment area from a combination of controls, fuel switching and shutdowns, and EPA believes SO<sub>2</sub> emissions from the utility sector will not increase back to 2002 or 2008 levels further supporting EPA's position in this ANPR.

Based on the information summarized above, and information provided in the technical support, which is a part of the docket

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<sup>10</sup> This facility shut down in 2011 pursuant to a federally enforceable Consent Decree.  
<https://www.epa.gov/enforcement/doe-run-resources-corporation-settlement>

for this action, EPA is providing advanced notice of its determination that Missouri has adequately demonstrated that the improvement in air quality is due to permanent and enforceable emissions reductions.

*Criteria (4) - The Area Has a Fully Approved Maintenance Plan Pursuant to Section 175A of the CAA (Section 107(d)(3)(E)(iv))*

In conjunction with its request to redesignate the St. Louis area to attainment for the 1997 annual PM<sub>2.5</sub> NAAQS, MDNR submitted a SIP revision on September 1, 2011, supplemented on March 31, 2014, and further clarified on September 17, 2014, to provide for the maintenance of the 1997 annual PM<sub>2.5</sub> NAAQS for at least ten years after the effective date of redesignation to attainment. EPA is providing advanced notice that it believes this maintenance plan meets the requirements for approval under section 175A of the CAA.

a. Maintenance Plan Requirements

Section 175A of the CAA sets forth the elements of a maintenance plan for areas seeking redesignation from nonattainment to attainment. Under section 175A, the plan must demonstrate continued attainment of the applicable NAAQS for at least ten years after the Administrator approves a redesignation to attainment. Because the 1997 PM<sub>2.5</sub> NAAQS will be revoked for the area if the area is redesignated to attainment, Missouri is

not required submit a revised maintenance plan eight years after the redesignation. To address the possibility of future NAAQS violations, the maintenance plan must contain such contingency measures, as EPA deems necessary, to assure prompt correction of any future 1997 annual PM<sub>2.5</sub> NAAQS violations. The Calcagni Memorandum provides further guidance on the content of a maintenance plan, explaining that a maintenance plan should address five requirements: (1) the attainment emissions inventory, (2) a maintenance demonstration, (3) a commitment to maintain the existing monitoring network, (4) verification of continued attainment, and (5) a contingency plan to plan or prevent or correct future violations. As discussed below, EPA is proposing that MDNR's maintenance plan includes all the necessary components and is thus proposing to approve it as a revision to the Missouri SIP.

b. Maintenance Plan Base Year Inventory

As discussed previously, the 2008 inventory is referenced as the baseyear and is used for the year of attainment is called the Attainment Year Inventory. The 2008 inventory is the inventory which all future years will be compared to in order to show maintenance. However, MDNR created a different 2008 onroad inventory for the comparison to future years in the maintenance plan. As explained previously, for the 2008 onroad attainment inventory, MDNR used NEI data which was developed using

Mobile6.2 to compare with the 2002 nonattainment base year. A second 2008 onroad inventory was developed utilizing MOVES2010 to establish a maintenance base year for comparison to the future 2017 and 2025 MOVES-based future year inventories. This allows for a smooth transition to the updated model and to prevent comparing a MOVES2010 version of 2008 attainment year with the Mobile6.2 version of the 2002 nonattainment base year inventory. Therefore, the 2008 onroad mobile source inventory used for supporting maintenance was developed using the most current version of EPA's highway mobile source emissions model, MOVES2010a.

Emissions projections to support maintenance through 2025 have been prepared for the years 2017 and 2025. While Missouri's maintenance plan projects maintenance of the 1997 Annual  $PM_{2.5}$  NAAQS through 2025, as noted above, EPA believes that the St. Louis area will continue to maintain the standard through 2027 for several reasons: All of the Federal regulatory requirements that enabled the area to attain the NAAQS will continue to be in effect and enforceable after the ten-year maintenance period. Overall emissions are projected to decline steadily through 2025. Because it is unlikely that emissions will suddenly increase in 2026 and 2027 in an amount that results in overall

emissions in the area exceeding an attainment year inventory levels. EPA expects that the St. Louis area will continue to maintain the 1997 Annual PM<sub>2.5</sub> NAAQS through 2027.

EPA has reviewed the documentation provided by MDNR and is providing advanced notice that the EPA believes the emissions inventory is acceptable. For more information on EPA's analysis of the 2008 emissions inventory, see EPA's TSD as part of this advanced notice of proposed rulemaking, or Appendix B, E and F of the state's 2014 submittal and additional clarifying information provided on September 17, 2014, available on line at [www.regulations.gov](http://www.regulations.gov), Docket ID No. EPA-R07-OAR-2017-0734.

#### c. Maintenance Demonstration

Section 175A requires a state seeking redesignation to attainment to submit a SIP revision to provide for the maintenance of the NAAQS in the Area "for at least ten years after the redesignation." EPA has interpreted this as a showing of maintenance "for a period of ten years following redesignation." Calcagni Memorandum, p. 9. Where the emissions inventory method of showing maintenance is used, the purpose is to show that emissions during the maintenance period will not increase over the attainment year inventory. Calcagni Memorandum, pp. 9-10.

As discussed in detail in the subsection below, Missouri's maintenance plan submission expressly documents that the area's emissions inventories will remain below the attainment year inventories through 2025. For a demonstration of maintenance, emissions inventories are required to be projected to future dates to assess the influence of future growth and controls; however, the maintenance demonstration need not be based on air quality modeling. See *Wall v. EPA*, 265 F.3d 426 (6<sup>th</sup> Cir.2001); *Sierra Club v. EPA*, 375 F. 3d 537 [(7<sup>th</sup> Cir.2004)]. See also 66 FR 53099 – 66 FR 53100; 68 FR 25430– 68 FR 25432. MDNR uses projection inventories to show that the Missouri portion of the St. Louis area will remain in attainment. MDNR developed projection inventories for an interim year of 2017 and a maintenance plan end year of 2025 to show that future emissions of direct PM<sub>2.5</sub>, NO<sub>x</sub>, SO<sub>2</sub>, NH<sub>3</sub> and VOC will remain at or below the attainment year 2008 emissions levels in the St. Louis area through the year 2025. In light of more recent information on CSAPR, Missouri submitted on September 17, 2014, a revision that updated their future year projections for EGU facilities using the presumption that CSAPR will be in place to control emissions from sources. Non-EGU Point source and nonpoint sources were developed using growth factors created from the EGAS model (<https://www.epa.gov/economic-and-cost-analysis-air-pollution-regulations>) using economic growth projections from the Policy

Insight® Model for Regional Economic Model, Inc. (REMI) to project the future year inventory. EPA's Nonroad Model and EPA's onroad mobile model, MOVES, were utilized to project mobile source future inventories.

EPA has reviewed the documentation provided by MDNR and is providing advanced notice that it finds the methodologies acceptable. Table 4-6 below shows the inventory summaries for the 2008 attainment year, 2017 interim year, and the 2025 maintenance plan end year for the entire area.

**Table 4. 2008 Emissions Inventory Summary (tpy)**

State	Source Category	NH <sub>3</sub>	NO <sub>x</sub>	PM <sub>2.5</sub> -Pri	SO <sub>2</sub>	VOC
Missouri	Point Sources	1,308.64	31,103.26	3,493.39	201,700.73	5,067.89
Illinois		208.31	16,981.51	2,448.15	21,853.56	4,277.72
Totals		1,516.95	48,084.77	5,941.54	252,431.33	9,345.61
Missouri	Area Sources	3,514.98	4,382.94	14,033.64	11,510.48	38,215.34
Illinois		3,354.13	1,638.36	5,161.76	246.67	7,796.34
Totals		6,869.11	6,021.30	19,195.40	11,757.15	46,011.68
Missouri	On-Road Mobile Sources	1,056.17	58,819.58	2,179.28	426.65	23,793.80
Illinois		250.58	15,012.94	577.99	116.76	5,069.55
Totals		1,306.75	73,832.52	2,757.27	543.41	28,863.35
Missouri	Off-Road Mobile Sources	15.68	20,722.57	1,199.82	544.3	11,545.53
Illinois		2.89	8,475.24	425.71	300.72	2,972.77
Totals		18.57	29,197.81	1,625.53	845.02	14,518.30
Grand Total		9,711.38	157,136.40	29,515.74	265,576.91	98,738.94

**Table 5. 2017 Emissions Inventory Summary (tpy)**

State	Source Category	NH <sub>3</sub>	NO <sub>x</sub>	PM <sub>2.5</sub> -Pri	SO <sub>2</sub>	VOC
Missouri	Point Sources	1,308.64	31,661.08	3,692.74	107,713.00	6,363.13
Illinois		221.12	11,891.31	2,601.95	20,221.18	4,962.34
Totals		1,529.76	43,552.39	6,294.69	127,934.18	11,325.47
Missouri	Area Sources	3,514.98	4,446.97	14,165.78	11,534.82	44,057.17
Illinois		3,364.32	1,694.82	4,706.63	258.36	8,607.70
Totals		6,879.30	6,141.79	18,872.41	11,793.18	52,664.87
Missouri	On-Road Mobile Sources	722.47	22,904.99	913.15	191.12	10,867.41
Illinois		186.79	5,623.42	231.68	49.31	2,364.85
Totals		909.26	28,528.41	1,144.83	240.43	13,232.26
Missouri	Off-Road Mobile Sources	15.75	10,505.88	787.35	193.55	7,398.02
Illinois		3.46	8,673.75	370.28	390.79	2,303.43
Totals		19.21	19,179.63	1,157.63	584.34	9,701.45
Grand Total		9,337.53	97,402.22	27,469.56	140,552.13	86,924.05

**Table 6. 2025 Emissions Inventory Summary (tpy)**

State	Source Category	NH <sub>3</sub>	NO <sub>x</sub>	PM <sub>2.5</sub> -Pri	SO <sub>2</sub>	VOC
Missouri	Point Sources	1,308.64	32,603.86	4,403.28	108,617.07	7,809.01
Illinois		242.69	12,822.94	2,865.19	21,853.56	5,541.80
Totals		1,551.33	45,426.80	7,268.47	130,470.63	13,350.81
Missouri	Area Sources	3,514.98	4,531.02	14,314.86	11,606.89	49,458.63
Illinois		3,374.17	1,735.20	4,668.15	268.04	9,249.75
Totals		6,889.15	6,266.22	18,983.01	11,874.93	58,708.38
Missouri	On-Road Mobile Sources	691.88	16,568.44	533.34	189.22	8,035.80
Illinois		178.80	3,616.52	181.73	49.15	1,592.92
Totals		870.68	20,184.96	715.07	238.37	9,628.72
Missouri	Off-Road Mobile Sources	17.63	8,895.81	640.68	219.9	7,178.29
Illinois		3.99	9,028.03	331.2	438.02	2,037.10
Totals		21.62	17,923.84	971.88	657.92	9,215.39
Grand Total		9,332.78	89,801.82	27,938.43	143,241.85	90,903.30

Table 7 below compares the 2008 base year to the 2025 projection year and shows that the St. Louis area is projected to reduce SO<sub>2</sub> emissions by 122,335 tpy, NO<sub>x</sub> emissions by 67,335 tpy, direct PM<sub>2.5</sub> emissions by 1,577 tpy, NH<sub>3</sub> emissions by 379 tpy, and VOC emissions by 7,836 tpy.

**Table 7. Comparison of 2008 Base Year and 2025 Projection Year (tpy)**

State	Source Category	NH <sub>3</sub>	NO <sub>x</sub>	PM <sub>2.5</sub> -Pri	SO <sub>2</sub>	VOC
Missouri	Point Sources	0.00	+1,500.60	+909.89	-93,083.66	+2,741.12
Illinois		34.38	-4,158.57	+417.04	-28,877.04	+1,264.08
Totals		34.38	-2,657.97	1,326.93	-121,960.70	+4,005.20
Missouri	Area Sources	0.00	+148.08	+281.22	+96.41	+11,243.29
Illinois		20.04	+96.84	-493.61	+21.37	+1,453.41
Totals		20.04	244.92	-212.39	117.78	+12,696.70
Missouri	On-Road Mobile Sources	-364.29	-42,251.14	-1,645.94	-237.43	-15,758.00
Illinois		-71.78	-11,396.42	-396.26	-67.61	-3,476.63
Totals		-436.07	-53,647.56	-2,042.20	-305.04	-19,234.63
Missouri	Off-Road Mobile Sources	1.95	-11,826.76	-559.14	-324.40	-4,367.24
Illinois		1.10	+552.79	-94.51	+137.30	-935.67
Totals		+3.05	-11,273.97	-653.65	-187.10	-5,302.91
Missouri Totals (Safety Margin)		-362.34	-52,429.22	-1,013.97	-93,549.08	-6,140.83
Illinois Totals (Safety Margin)		-16.26	-14,905.36	-567.34	-28,785.98	-1,694.81
Grand Total		-378.60	-67,334.58	-1,577.31	-122,335.06	-7,835.64

\*Note: A negative value indicates a projected decrease in emissions from 2008 to 2025.  
A positive value indicates a projected increase in emissions from 2008 to 2025.

Table 5-4 of Missouri's September 17, 2014 submittal shows that in the 2017 interim year, emissions levels in the area will remain below the 2008 base year for all pollutant categories.

While MDNR's maintenance plan projects maintenance of the 1997 Annual PM<sub>2.5</sub> NAAQS through 2025, as noted above, EPA is providing advanced notice that it expects St. Louis Area will continue to maintain the standard through 2028 for several reasons: All of the Federal regulatory requirements that enabled the Area to attain the NAAQS will continue to be in effect and enforceable after the ten-year maintenance period and overall emissions are projected to decline significantly through 2025. Again, because there is no indication that emissions will suddenly increase in 2026, 2027 and 2028 in an amount that

results in overall emissions in the area exceeding attainment year inventory levels, EPA is providing advanced notice that it expects that the St. Louis Area will continue to maintain the 1997 Annual PM<sub>2.5</sub> NAAQS through 2028.

d. Monitoring Network

There are currently 6 monitors measuring PM<sub>2.5</sub> in the Missouri portion of the St. Louis area<sup>11</sup>. MDNR has committed to continue operation of the network in the area in compliance with 40 CFR part 58 and have thus addressed the requirement for monitoring. EPA approved Missouri's 2016 monitoring plan on December 29, 2016, see <https://www.epa.gov/ks/region-7-air-quality-program>.

e. Verification of Continued Attainment

MDNR has the legal authority to enforce and implement the requirements of the Missouri portion of the St. Louis area 1997 annual PM<sub>2.5</sub> NAAQS maintenance plan. This includes the authority to adopt, implement and enforce any subsequent emissions control contingency measures determined to be necessary to correct future PM<sub>2.5</sub> attainment problems.

MDNR will track the progress of the maintenance plan by performing future reviews of triennial emission inventories for the St. Louis area as required in the Air Emissions Reporting

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<sup>11</sup> One monitor in the Missouri portion of the St. Louis area is a middle scale monitor and is not comparable to the 1997 PM<sub>2.5</sub> Annual NAAQS

Rule (AERR). For these periodic inventories, MDNR will review the assumptions made for the purpose of the maintenance demonstration concerning projected growth of activity levels.

f. Contingency Measures in the Maintenance Plan.

Section 175A of the CAA requires that a maintenance plan include such contingency measures as EPA deems necessary to assure that the state will promptly correct a violation of the NAAQS that occurs after redesignation. The maintenance plan should identify the contingency measures to be adopted, a schedule and procedure for adoption and implementation, and a time limit for action by the state. A state should also identify specific indicators to be used to determine when the contingency measures need to be implemented. The maintenance plan must include a requirement that a state will implement all measures with respect to control of the pollutant that were contained in the SIP before redesignation of the area to attainment in accordance with section 175A(d).

The contingency plan included in the submittal includes a triggering mechanism to determine when contingency measures are needed and a process of developing and implementing appropriate control measures. MDNR will use actual ambient monitoring data as the triggering event to determine when contingency measures should be implemented.

Missouri has identified two different levels of corrective responses should the annual  $\text{PM}_{2.5}$  level exceed the NAAQS in any year. A level I trigger occurs when the annual average monitored  $\text{PM}_{2.5}$  concentration exceeds  $15.0 \text{ ug/m}^3$  in any year at any monitoring station in the nonattainment area as described in the state's submittal for the St. Louis area.

MDNR will evaluate a level I condition, if it occurs, as expeditiously as practicable to determine the causes of the ambient  $\text{PM}_{2.5}$  increase. If adverse emission trends are likely to continue, MDNR will first evaluate and subsequently adopt and implement control measures, taking into consideration the ease of implementation and the technical and economic feasibility of selected measures, as outlined in the state's plan no later than twenty-four months after quality-assured ambient data has been entered into EPA's Air Quality System (AQS) database indicating a level I trigger.

A level II trigger is activated when any violation of the 1997 annual  $\text{PM}_{2.5}$  NAAQS at any Federal reference method monitor in the St. Louis maintenance area is recorded, based on quality-assured monitoring data. In this event, MDNR will conduct a comprehensive study to determine the cause of the violation within six months of the triggering event. Selected measures will be implemented as expeditiously as practicable, taking into consideration the ease of implementation and the technical and

economic feasibility of selected measures, as outlined in the state's plan no later than twenty-four months after quality-assured ambient data has been entered into EPA's AQS database indicating a level II trigger.

The comprehensive measures will be selected from the following types of measures, as further detailed in the state's submission, or from any other measure deemed appropriate and effective at the time the selection is made by MDNR:

- Controls for local individual sources with significant effects on the monitored violation;
- Revisions to current rules that control  $PM_{2.5}$  and  $PM_{2.5}$  precursor emissions such as lowering limits and broadening applicability thresholds of current rules; and
- Establishing new rules that control  $PM_{2.5}$  and  $PM_{2.5}$  precursor emissions

In addition to the triggers indicated above, Missouri commits to compiling and monitoring  $PM_{2.5}$  and  $PM_{2.5}$  precursor emissions inventories for the Missouri portion of the area every three years throughout the duration of the maintenance period to facilitate the emissions trends analysis included in the contingency plan under levels I and II.

EPA is providing advanced notice of its analysis that that the maintenance plan adequately addresses the five basic components of a maintenance plan: attainment emission inventory, maintenance demonstration, monitoring network, verification of continued attainment, and a contingency plan. Therefore, EPA is providing advanced notice that it in a future action, it intends to find that the maintenance plan SIP revision submitted by MDNR for the Missouri portion of the St. Louis area meets the requirements of section 175A of the CAA and is approvable.

In addition, EPA is providing advanced notice that it intends to determine that the state submission has met the public notice requirements for SIP submissions in accordance with 40 CFR 51.102. The submission also satisfied the completeness criteria of 40 CFR part 51, appendix V. As explained above and in more detail in the technical support document which is part of this document, the revision meets the substantive SIP requirements of the CAA, including section 110 and implementing regulations.

#### **V. What is EPA's Initial Analysis of the State's MVEBs?**

Under section 176(c) of the CAA, new transportation plans, programs, and projects, such as the construction of new highways, must "conform" to (*i.e.*, be consistent with) the part of the state's air quality plan that addresses pollution from

cars and trucks. Conformity to the SIP means that transportation activities will not cause new air quality violations, worsen existing violations, or delay timely attainment of the NAAQS or any interim milestones. If a transportation plan does not conform, most new projects that would expand the capacity of roadways cannot go forward. Regulations at 40 CFR part 93 set forth EPA policy, criteria, and procedures for demonstrating and assuring conformity of such transportation activities to a SIP. The regional emissions analysis is one, but not the only, requirement for implementing transportation conformity. Transportation conformity is a requirement for nonattainment and maintenance areas. Maintenance areas are areas that were previously nonattainment for a particular NAAQS but have since been redesignated to attainment with an approved CAA section 175A maintenance plan for that NAAQS.

Under the CAA, states are required to submit at various times, control strategy SIPs and maintenance plans for nonattainment areas. These control strategy SIPs (including RFP and attainment demonstration) and maintenance plans create MVEBs for criteria pollutants and/or their precursors to address pollution from cars and trucks. Per 40 CFR part 93, a MVEB must be established for the last year of the maintenance plan. A state may adopt MVEBs for other years as well. A MVEB is the portion of the total allowable emissions in the maintenance

demonstration that is allocated to highway and transit vehicle use and emissions. See 40 CFR 93.101. The MVEBs serve as a ceiling on emissions from an area's planned transportation system. The MVEBs concept is further explained in the preamble to the November 24, 1993, Transportation Conformity Rule. See 58 FR 62188. The preamble also describes how to establish the MVEBs in the SIP and how to revise the MVEBs.

After interagency consultation with the transportation partners for the St. Louis area, Missouri developed MVEBs for NO<sub>x</sub> and PM<sub>2.5</sub> for the Missouri portion of the St. Louis nonattainment area. Missouri has developed these MVEBs for 2008 and 2025. The MVEBs reflect the total on-road emissions for 2008 and 2025, plus an allocation from the available NO<sub>x</sub> and PM<sub>2.5</sub> safety margin. Under 40 CFR 93.101, the term "safety margin" is the difference between the attainment level (from all sources) and the projected level of emissions (from all sources) in the maintenance plan. All or a portion of the safety margin can be allocated to the transportation sector; however, the total emissions from all sources must remain below the attainment level (40 CFR 93.124(a)). The NO<sub>x</sub> and PM<sub>2.5</sub> MVEBs and allocation from the safety margin were developed in consultation with the transportation partners and were added to account for uncertainties in population growth, changes in modeled vehicle

miles traveled, and new emission factor models. The NO<sub>x</sub> and PM<sub>2.5</sub> MVEBs for the Missouri portion of the St. Louis area are identified in Table 9, below.

**Table 8. Missouri Portion of the St. Louis Area PM<sub>2.5</sub> and NO<sub>x</sub> 2008 and 2025 MVEBs (tpy)**

	PM <sub>2.5</sub>	NO <sub>x</sub>
<b>2008 Motor Vehicle Emissions Budgets</b>	<b>2,179</b>	<b>58,820</b>
2025 Mobile Emissions	533	16,568
2025 Safety Margin Allocated (20%)	107	3,314
<b>2025 Motor Vehicle Emissions Budgets</b>	<b>640</b>	<b>19,882</b>

In an effort to accommodate future variations in travel demand models (TDM) results and the vehicle miles traveled forecast when no change to the network is planned, MDNR consulted with the interagency consultation group, including U.S. EPA Region 7, to determine a reasonable approach to address this variation. The projected 2025 annual on-road motor vehicle emissions for direct PM<sub>2.5</sub> and NO<sub>x</sub> are 533 and 16,568 tons, respectively.

A safety margin is necessary to accommodate the variability, or worst-case scenarios that can occur due to future planning assumptions. The Missouri portion of the St. Louis area's available total safety margin for NO<sub>x</sub> is 52,429 and direct PM<sub>2.5</sub> is 1,014. However, Missouri is only using a portion of this available safety margin. The worst-case daily motor vehicle emissions projection for PM<sub>2.5</sub> is twenty percent above the projected 2025 on-road emissions. For the PM<sub>2.5</sub> MVEB, the

needed annual safety margin would be twenty percent above the projected 533 tons for 2025 onroad emissions. Therefore, the needed annual safety margin for PM<sub>2.5</sub> would be 107 tons resulting in an overall MVEB of 640 tons per year. The worst-case daily motor vehicle emissions projection for NO<sub>x</sub> is twenty percent above the projected 16,568 tons for 2025 on-road emissions. Therefore, the needed annual safety margin for the NO<sub>x</sub> MVEB would be 3,314 tons, resulting in an overall MVEB of 19,882 tons per year.

The maintenance plan establishes 2008 and 2025 MVEBs for direct PM<sub>2.5</sub> and NO<sub>x</sub> for the St. Louis area. EPA is providing advanced notice that in a future action it will initiate the process for determining whether or not the MVEBs are adequate for transportation conformity purposes. The publication of the future notice starts a 30-day public comment period on the adequacy of the submitted MVEBs. The comment period will be concurrent with the comment period on of the future action and comments should be submitted to the docket for that rulemaking. EPA may choose to make its determination on the adequacy of the budgets either in the final rulemaking on this maintenance plan and redesignation request or by informing the state of the determination in writing, and publishing a notice in the **Federal Register**. EPA will also update its adequacy web page to reflect

the decision on the adequacy of the budgets (<https://www.epa.gov/state-and-local-transportation>).<sup>12</sup> EPA, through is providing advanced notice, that it intends to propose to approve the MVEBs for use to determine transportation conformity in the Missouri portion of the St. Louis area. EPA has reviewed the budgets and the entire maintenance plan and redesignation request. In conducting that review we applied the adequacy criteria found in 40 CFR 93.118(e)(4) and found that the budgets satisfy all of these criteria. For more information on EPA's review, see EPA's "Emissions Inventory and Motor Vehicle Emissions Budget (MVEB) Technical Support Document (TSD) for the Redesignation Request and Maintenance Plan for the St Louis, Missouri 1997 PM<sub>2.5</sub> Nonattainment Area" available on line at [www.regulations.gov](http://www.regulations.gov), Docket ID No. EPA-OAR-R07-2017-0734.

As discussed throughout this notice EPA's review of the redesignation request and maintenance plan for this area shows that the area has attained the 1997 annual PM<sub>2.5</sub> NAAQS and will continue to maintain that NAAQS through 2028. While budgets were submitted for 2008 and 2025, EPA is providing advanced notice that the submitted motor vehicle emissions budgets for NO<sub>x</sub> and

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<sup>12</sup> For additional information on the adequacy process, refer to 40 CFR 93.118(f) and the discussion of the adequacy process in the preamble to the 2004 final transportation conformity rule. (69 FR 40039-40043)

PM<sub>2.5</sub> for 2025 are consistent with maintenance of the 1997 annual PM<sub>2.5</sub> NAAQS through at least 2028 for the reasons discussed above.

We are providing advanced notice that we intend to approve the redesignation request, maintenance plan and the NO<sub>x</sub> and PM<sub>2.5</sub> budgets contained in the maintenance plan in a subsequent action.

#### **VI. What is EPA's Initial Analysis of the State's 2008 Emissions Inventory**

EPA has reviewed Missouri's documentation of the emissions inventory techniques and data sources used for the derivation of the 2008 emissions estimates and has found that Missouri has thoroughly documented the derivation of these emissions inventories. The submittal from the state shows that at the time the 2008 emissions inventory was the most complete emissions inventory for PM<sub>2.5</sub> and PM<sub>2.5</sub> precursors in the St. Louis area. Based upon EPA's review, we propose to find that 2008 emissions inventories are as complete and accurate as possible given the input data available to Missouri. Therefore, we are providing advanced notice and taking comment on the 2008 NH<sub>3</sub>, VOC, NO<sub>x</sub>, direct PM<sub>2.5</sub> and SO<sub>2</sub> emissions inventories as a base year inventory. Final approval of the 2008 base year emissions inventory will satisfy the emissions inventory requirement under section 172(c)(3) of the CAA. For more information on EPA's

analysis of the 2008 base year emissions inventory, see EPA's "Emissions Inventory and Motor Vehicle Emissions Budget (MVEB) Technical Support Document (TSD) for the Redesignation Request and Maintenance Plan for the St Louis, Missouri 1997 PM<sub>2.5</sub> Nonattainment Area" available on line at [www.regulations.gov](http://www.regulations.gov), Docket ID No. EPA-OAR-R07-2017-0734.

## **VII. Summary of Advanced Notice of Proposed Actions**

EPA is providing advanced notice on several actions regarding the area's redesignation and maintenance of the 1997 PM<sub>2.5</sub> NAAQS. We are processing this as an advanced notice of proposed action because we are soliciting comments on the information provided in this notice and the appropriate of EPA's future action. First, EPA is giving advanced notice that in a future action it intends to determine, based on data for the 2015-2017 monitoring period, and after review of all available data in AQS, that the Missouri portion of the St. Louis area is attaining the 1997 annual PM<sub>2.5</sub> NAAQS. EPA is also providing advanced notice that it believes the St. Louis area has met the criteria under CAA section 107(d)(3)(E) for redesignation from nonattainment to attainment for the 1997 annual PM<sub>2.5</sub> NAAQS. Therefore, EPA is providing advanced notice and taking comment on Missouri's request to redesignate the St. Louis area and

change the legal designation of Franklin, Jefferson, St. Charles, and St. Louis and the City of St. Louis from nonattainment to attainment for the 1997 annual PM<sub>2.5</sub> NAAQS.

Second, EPA is providing advanced notice and taking comment on the maintenance plan for the St. Louis area, including the PM<sub>2.5</sub> and NO<sub>x</sub> MVEBs for 2008 and 2025 submitted by Missouri. The maintenance plan demonstrates that the area will continue to maintain the 1997 annual PM<sub>2.5</sub> NAAQS, and the budgets meet all of the adequacy criteria contained in 40 CFR 93.118(e)(4) and (5).

In addition, EPA is providing advanced notice of proposed approval of Missouri's 2008 base year emissions inventory in accordance with section 172(c)(3) of the CAA. If finalized, approval of the redesignation request would change the official designation of St. Louis area for the 1997 annual PM<sub>2.5</sub> NAAQS, found at 40 CFR part 81, from nonattainment to attainment.

Dated: December 15, 2017.

James B. Gulliford,  
Regional Administrator,  
Region 7.